

CLAIMS

What is claimed is:

1. A universal vaccine for treating tumors of any origin, comprising:
5 at least one telomerase reverse transcriptase(hTRT) peptide in an
 amount effective for initiating and enhancing a cytotoxic T lymphocyte (CTL)
 response against mammalian cancer cells; and
 a physiologically acceptable carrier.
2. The vaccine according to claim 1, wherein the telomerase peptide is modified
10 to enhance binding to a major histocompatibility complex (MHC) molecule.
3. The vaccine according to claim 2, wherein the MHC molecule is a Class I.
4. The vaccine according to claim 3, wherein the MHC molecule is a human
leucocyte antigen (HLA).
5. The vaccine according to claim 4, wherein the MHC molecule is HLA-2.
- 15 6. The vaccine according to claim 1, wherein the hTRT peptide is a human
telomerase reverse transcriptase peptide.
7. The vaccine according to claim 6, wherein the peptide is from about 7 to about
15 amino acid residues in length.
8. The vaccine according to claim 1, wherein the peptide is effective alone.
- 20 9. The vaccine according to claim 1, wherein the peptide is effective in
combination with other peptides.

10. The vaccine according to claim 1, wherein the vaccine also comprises an adjuvant.
11. The vaccine according to claim 1, wherein the carrier is a mammalian cell.
12. The vaccine according to claim 11, wherein the carrier mammalian cell is a
5 transfected or transgenic cell.
13. A synthetic hTRT peptide restricted by a Class I major histocompatibility complex (MHC) molecule.
14. A method for inducing and enhancing a CTL response against cancer cells, comprising:
10 harvesting mammalian blood leucocytes;
pulsing with an effective amount of hTRT; and
contacting cancer cells with an effective amount of pulsed leucocytes.
15. The method according to claim 13, wherein the contacting is accomplished *in vitro*.
- 15 16. The method according to claim 13, wherein the contacting is accomplished *in vivo*.
17. A method for targeting cytotoxic lymphocytes (CTL) to tumor cells by administering an effective amount of telomerase transcriptase (TRT) peptide to a mammalian recipient, which amount is effective to attract CTL to the tumor cells.
- 20 18. The method according to claim 16, wherein the recipient is a cancer patient.

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